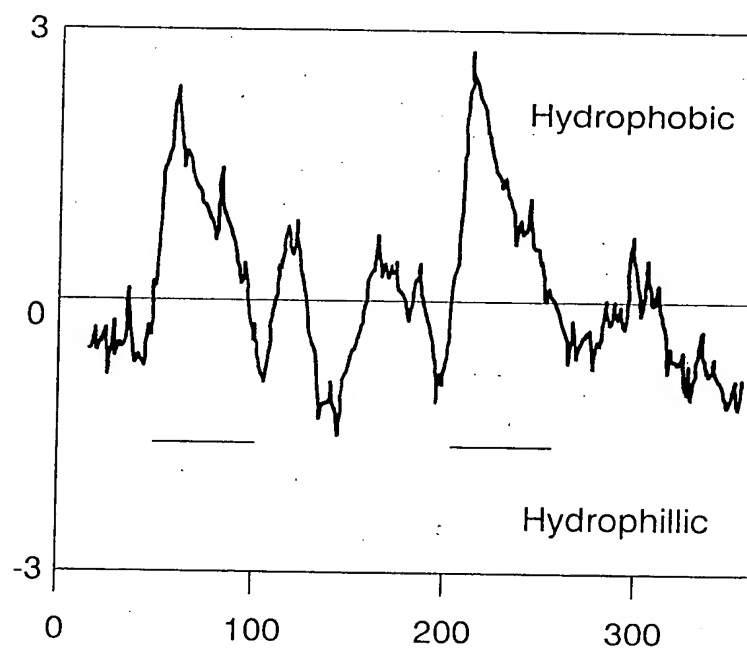
**FIGURE 1A****FIGURE 1B**

1002955-122101

total 9562001

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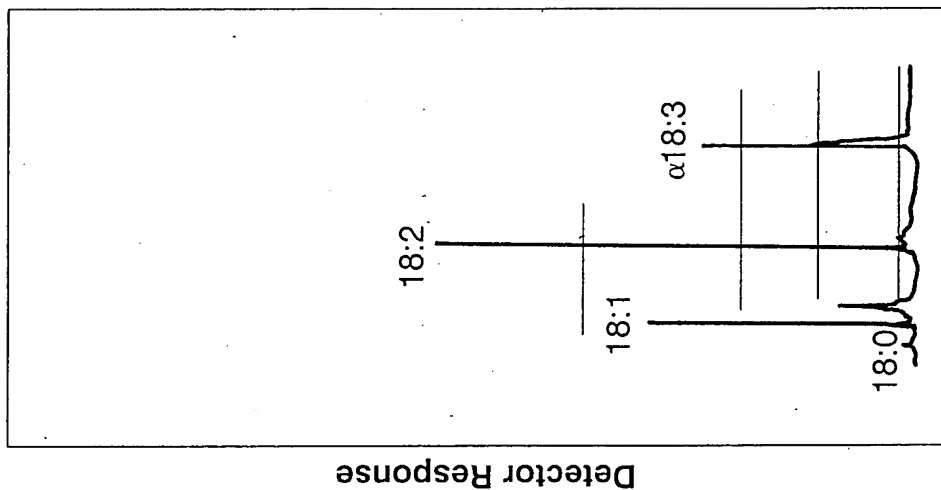


FIGURE 2A

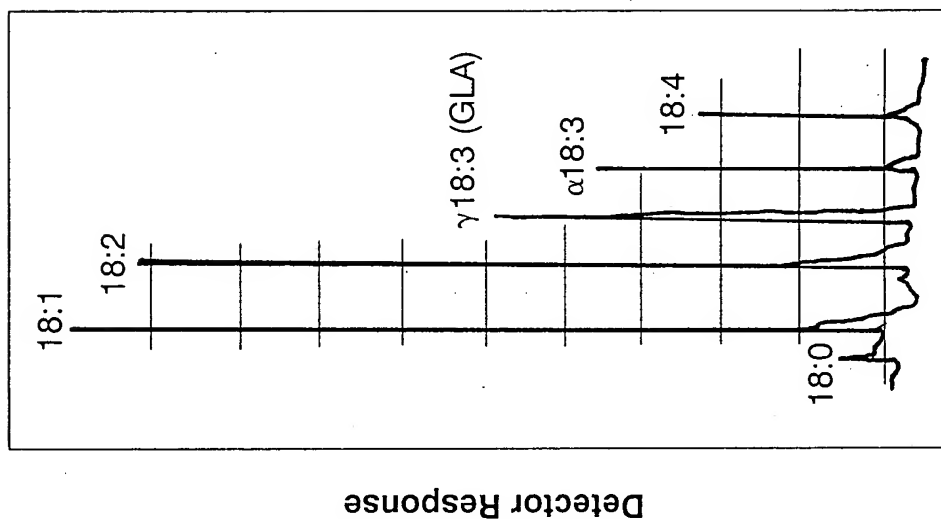
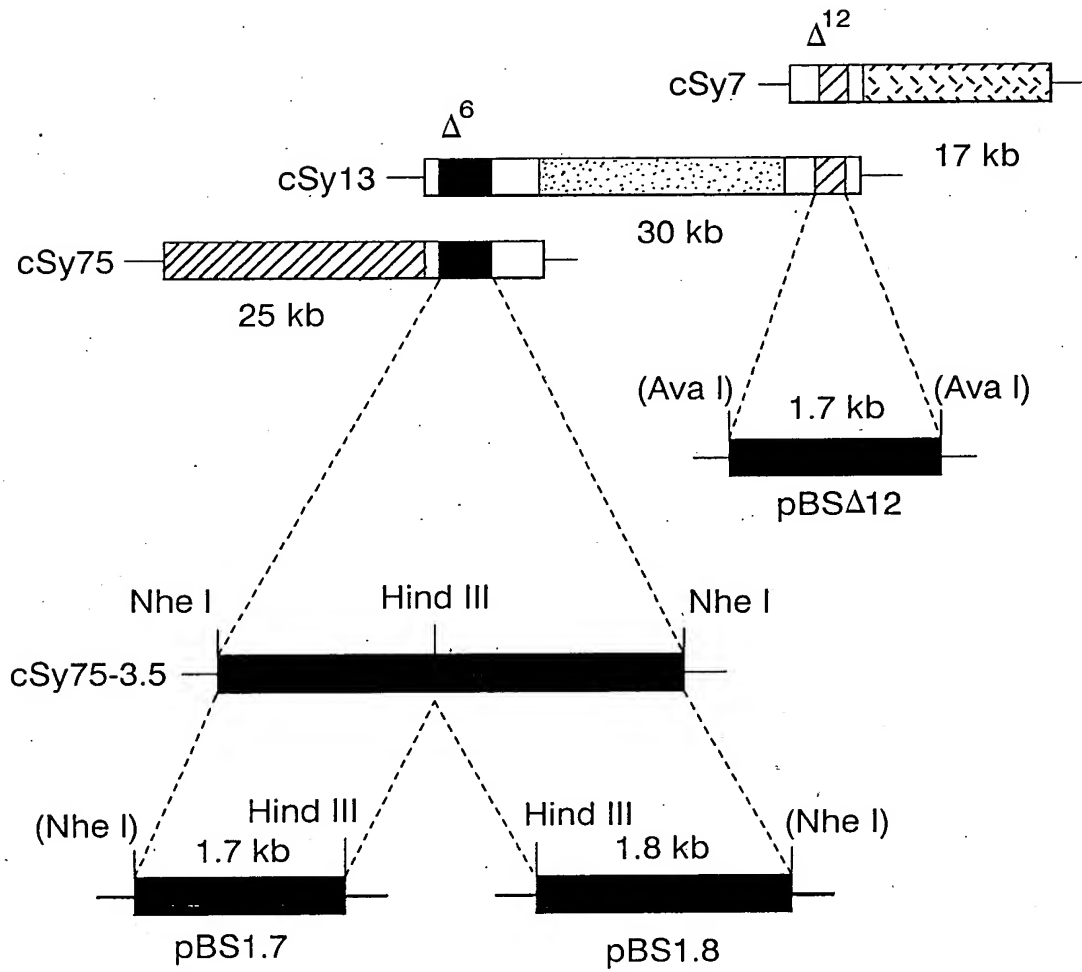


FIGURE 2B

**FIGURE 3**

10029756 95262001

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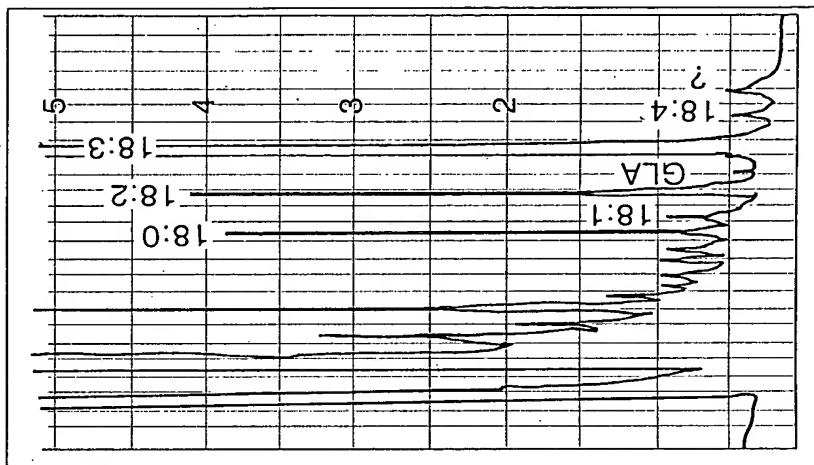


FIGURE 4B

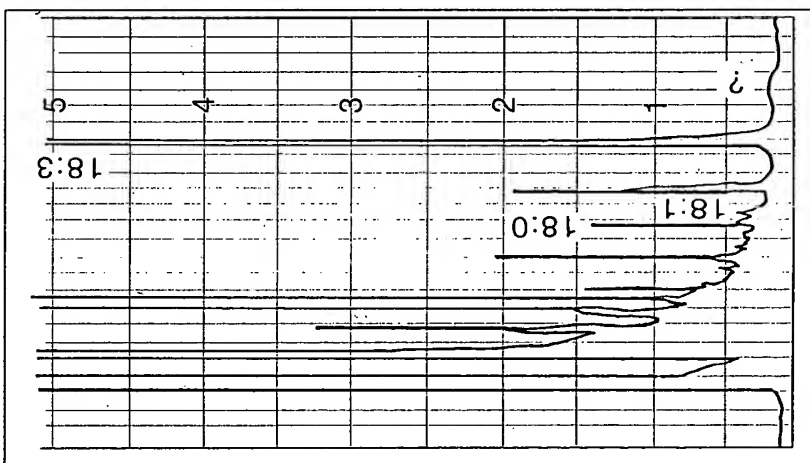


FIGURE 4A

Total: 954620F

A - - - - - A

```

1  aatatctgcc taccctccca aagagagtag tcatttttca tcaatggctg
81  aactcaagaa ccacgataaa cccggagatc tatggatctc gatccaaggg
161 gaccatccag gtggcagctt tcccttgaag agtcttgctg gtcaagaggt
241 ctctacatgg aagaatcttg ataagttttt cactgggtat tatcttaag
321 ataggaagct tgtgtttgag ttctctaaaa tgggtttgta tgacaaaaaa
401 atagcaatgc tgtttgctat gagtgtttat ggggttttgt tttgtgaggg
481 gatgggggtt ctttggatc agagtgggtg gattggacat gatctgggc
561 ataatgttat ggttatttt gctgcaaat gtccttcagg aataagtatt
641 cacattgcct gtaatagcct tgaatatgac cctgatttac aatataacc
721 ttcaactcacc tctcatctt atgagaaaaa gttgactttt gactctttat
801 cattttaccc tattatgtgt gctgctaggg tcaatatgta tgtacaatct
881 tcctatcgag ctgaggaaact ctgggatgc ctagtgtctt cgatttggta
961 gggtgaaaga attatgtttg ttattgcaag tttatcagtg actggaatgc
1041 ctccaagtgt ttatgttggg aagcctaaa ggaataattg gtttgagaaa
1121 cctccttggg tggattgggt tcatggtgga ttgcaattcc aaattgagca
1201 ccttaggaaa atctcgccct acgtgacga gttatgcaag aacataaatt
1281 ccaatgaaat gacactcaga acattgagga acacagcatt gcaggctagg
1361 gtaagggaag ctcttcacac tcatggttaa aattaccctt agttcatgta
1441 gtgtcttgtc ttggttctac ttgttggagt cattgaaact tgtctttat
1521 gaggttttgc ttcatctccc attattgatg aataaggagt tgcataattg
1601 gaatgtactt tgtaccactg tgtttcagt tgaagctcat gtgtacttct
1681 tattt

```

FIGURE 5A(1)

101221" 9526300T

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A | | | | | | | | | | | | | | | | | | | | A
ctcaaatcaa gaaatacatt acctcagatg 80
aaagccctatg atgtttcgga ttgggtgaaa 160
aactgatgca ttgtttgcat tccatcctgc 240
attactctgt ttctgagggt tctaaagatt 320
ggtcataatta gtgttgcaac ttgtgcttt 400
tgttttggta cattgtttt ctgggtgttt 480
attatatggt agtgtctgat tcaaggctta 560
ggttgggtgga aatggaacca taatgcacat 640
attcccttgt gtgtcttcca agttttttgg 720
caagatttctt tgttaagtta caacattgga 800
ctcataaatgt gtgtgaccac gagaaatgtg 880
cccgttgctt gtgtcttgtt tgccctaattg 960
aacaagttca gtgtctccttg aaccacttct 1040
caaacggatg ggacacttga catttcttgt 1120
tcattttgtt cccaagatgc ctagatgcaa 1200
tgccttacaa ttatgcatct ttctccaagg 1280
gataataacca agccgctccc gaagaatttg 1360
ataaatttgag attatgtatc tcctatgttt 1440
ggtttatttag atgtttttta atataattta 1520
caattgttgt gctcaaatatc tgataatttg 1600
atagactttg tttaaatggt tatgtcatgt 1680
1685

FIGURE 5A(2)

101221" 95262001

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A - - - - - A

1 MAAQIKKYIT SDELKNHDKP GDLWISIQGK AYDVSDWVKD HPGGSFPLKS
81 LKDYSVSEVS KDYRKLVEFF SKMGLYDKKG HIMFATLCFI AMLFAMSVYG
161 AGHYMVVSDS RLNKFMGIFA ANCLSGISIG WWKWNHNAHH IACNSLEYDP
241 SLSRFFVSYQ HWTFFYPIMCA ARLNMYVQSL IMLLTKRNVSYRAQELLGCL
321 GMQOVQFSLN HFSSSVYVGK PKGNNWFEO TDGTLDISCP PWMDWFHGG
401 HNL PYN YASF SKANEMTLRT LRNTALQARD ITKPLPKNLV WEALHTHG

FIGURE 5B(1)

total 9546200T

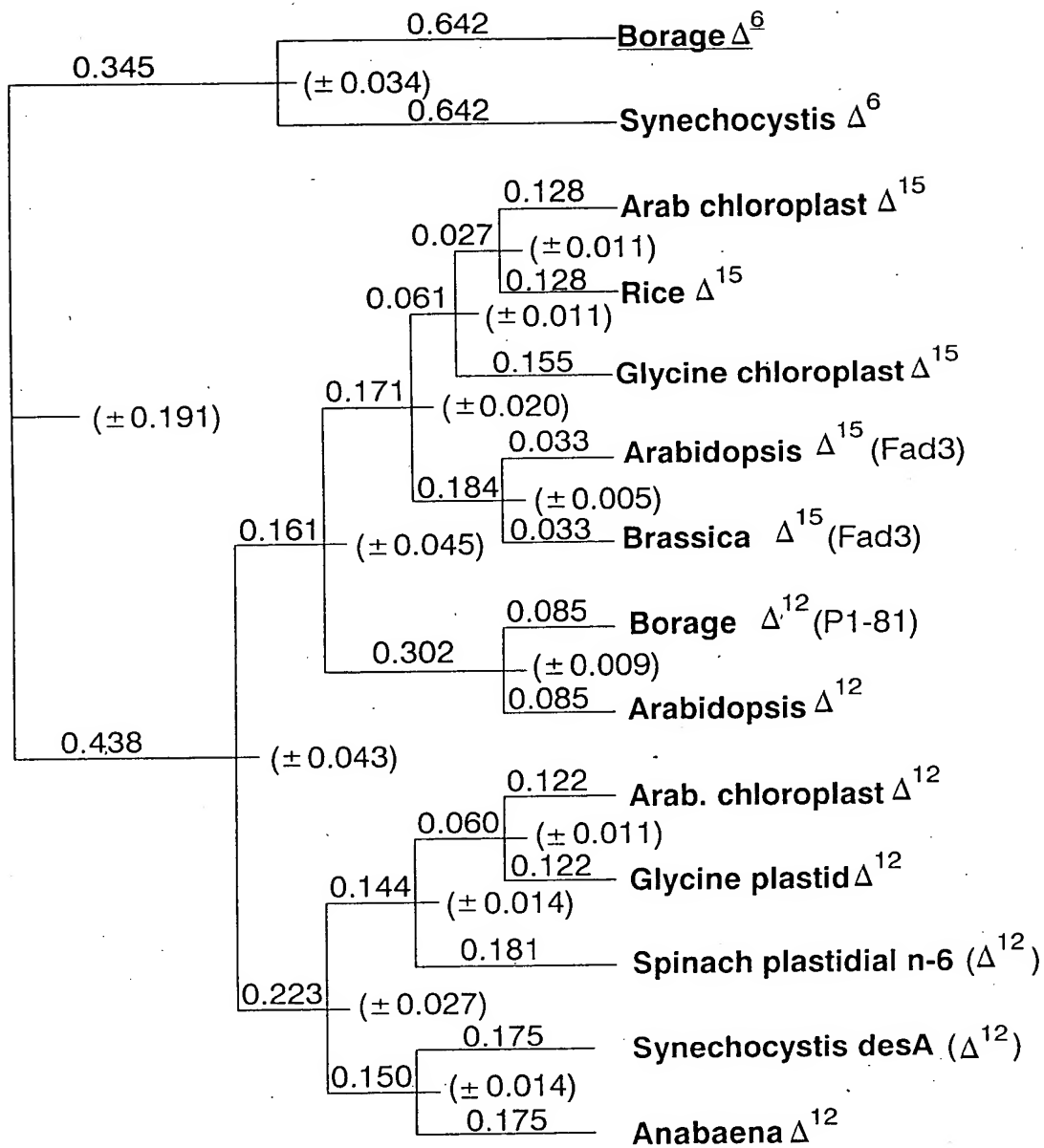
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A | | | | | A

LAGQEVTD	AF	VAFH	PASTWK	NLDKFF	TGY	80
VLFCEGV	LH	LFSG	CLMGFL	WI	QSGWIGHD	160
DLOYP	PFLV	SSKFF	GSLS	TS	HFYEKRL	240
VF	SIWY	PLLV	SCL	PNWGERI	MFV	IASLSVT 320
QFQIEH	HLFP	KMPRC	NLRKI	SPYV	IELCKK	400
						448

FIGURE 5B(2)

10029755.122101

**FIGURE 6**

101221" 9526200F

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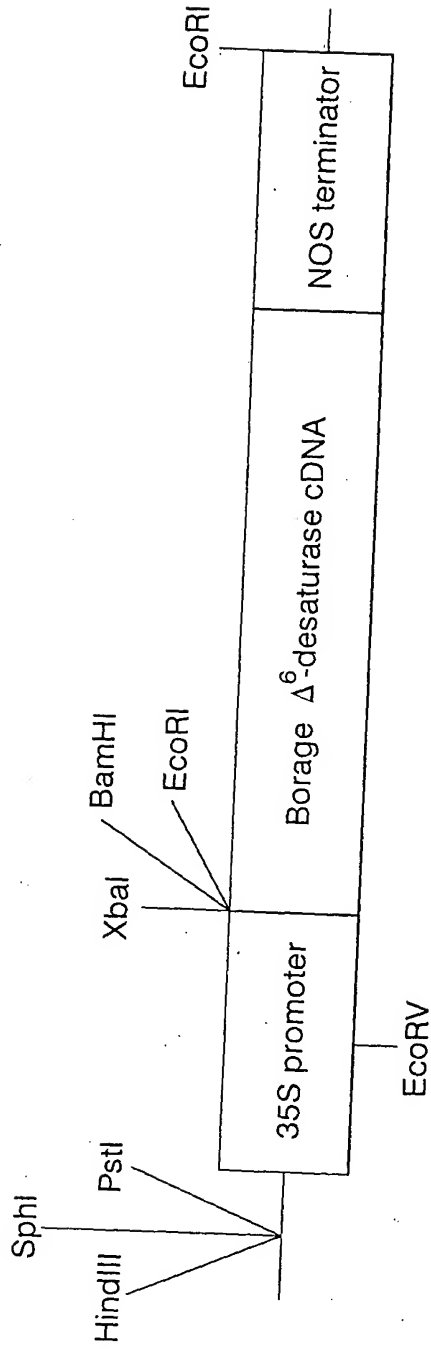


FIGURE 7

10029756-122104

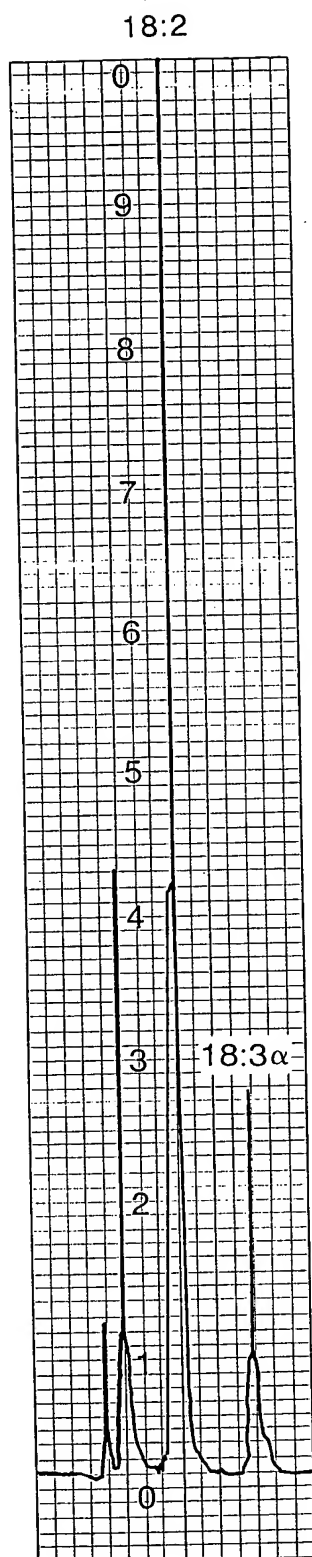


FIGURE 8A

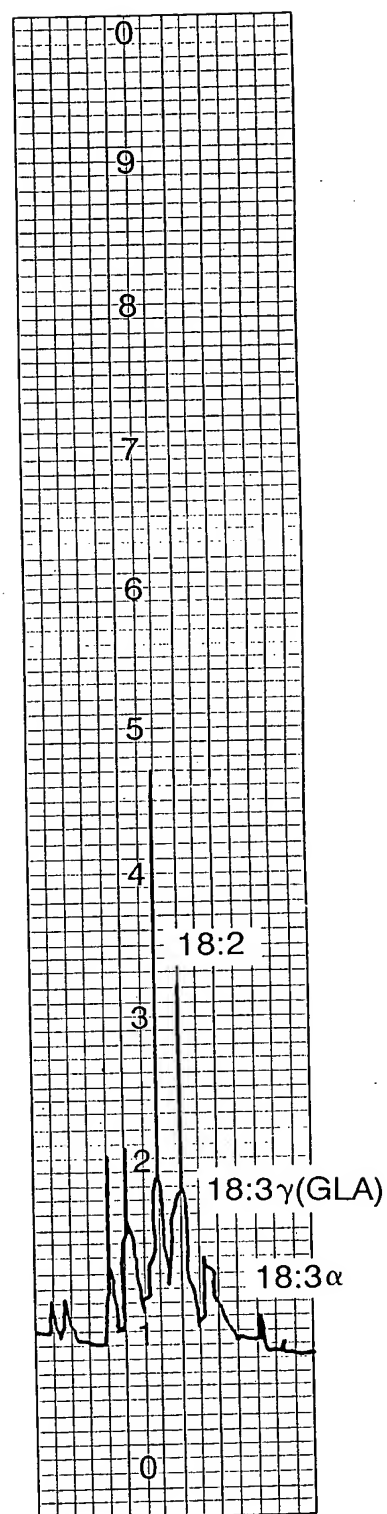


FIGURE 8B

10029756.122101

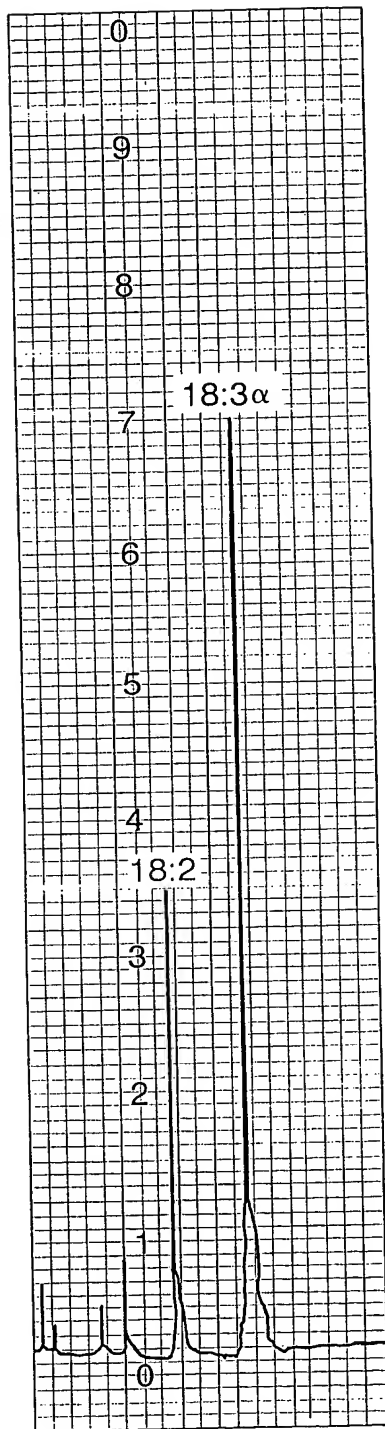


FIGURE 9A

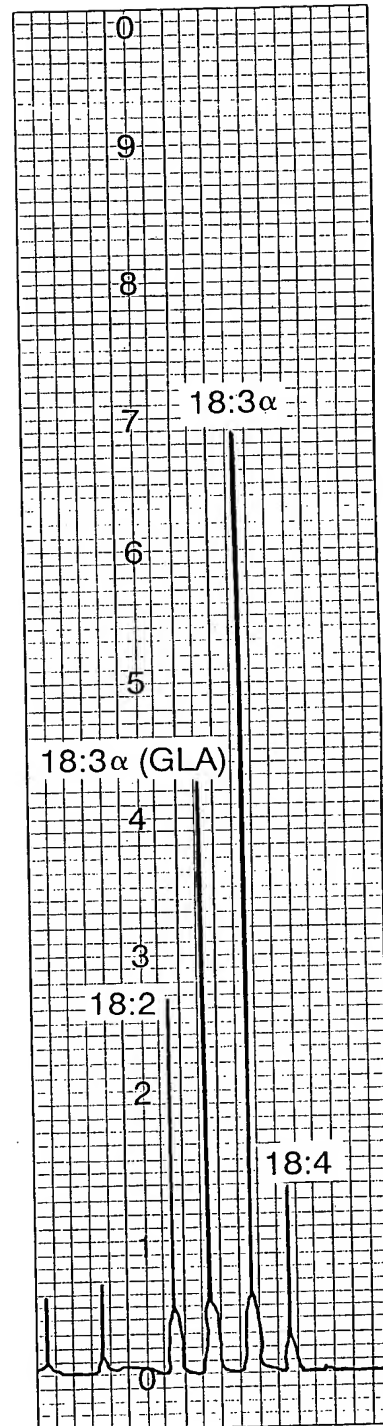


FIGURE 9B

[illegible]

B  **b**

FIGURE 10A

100255 95462001

A	-----											
	TCC	CAC	ACA	ATG	GAG	GGC	GAA					
				M	E	G	E					
	AAG	TCC	GGC	GAT	CTC	TGG						
	K	S	G	D	L	W						
	GGG	GAG	CAC	CCC	GGC	GGC						
	A	E	H	P	G	G						
	GCC	TTC	ATT	CGG	TAC	CAC						
	A	F	I	A	Y	H						
	TAC	TAC	CTC	AAG	GAC	TTC						
	Y	Y	L	K	D	F						
	GAG	ATG	TCG	CGG	TCC	GGG						
	E	M	S	R	S	G						
	GGC	GTT	GGG	GTC	ATG	ATG						
	G	V	A	V	M	M						
	GTT	CAC	ATG	CTC	TGC	GGC						
	V	H	M	L	C	G						
	CAT	GAC	TCC	GGC	CAT	TAC						
	H	D	S	G	H	Y						

C-----C												

FIGURE 10B

CAG	GTG	ATG	CCA	ACC	CGT	GGA	TAC	AAC	AGA	ATC	ACG	CAA	CTC
Q	V	M	P	T	R	G	Y	N	R	I	T	Q	L
ACC	GGA	ATC	AGC	ATC	GCG	TGG	TGG	AAG	TGG	ACC	CAC	AAC	GCC
T	G	I	S	I	A	W	W	K	W	T	H	N	A
AGC	CTC	GAC	TAC	GAC	CCC	GAC	CTC	CAG	CAC	ATC	CCC	GTA	TTC
S	L	D	Y	D	P	D	L	Q	H	I	P	V	F
TTC	AAC	TCC	ATC	ACC	TCG	GTC	TTC	TAT	GGC	CGA	GTC	CTG	AAA
F	N	S	I	T	S	V	F	Y	G	R	V	L	K
TTC	CTA	GTC	AGC	TAC	CAG	CAC	TGG	ACC	TAC	TAC	CCG	GTC	ATG
F	L	V	S	Y	Q	H	W	T	Y	Y	P	V	M
CTC	TTC	ATC	CAG	ACC	TTT	TTA	TTG	CTC	CTC	ACC	AGG	CGC	GAC
L	F	I	Q	T	F	L	L	L	L	T	R	R	D
AAC	TTA	ATG	GGT	ATC	GCG	GTT	TTC	TGG	ACG	TGG	TTC	CCG	CTC
N	L	M	G	I	A	V	F	W	T	W	F	P	L
AAC	TGG	CCT	GAA	CGG	TTC	GGG	TTC	GTC	CTC	ATC	AGC	TTT	GCG
N	W	P	E	R	F	G	F	V	L	I	S	F	A
GTC	CAG	TTC	ACG	CTC	AAC	CAC	TTC	TCC	GGC	GAC	ACA	TAC	GTG
V	Q	F	T	L	N	H	F	S	G	D	T	Y	V

total 9346200

D		C		C		F		D		F	
ATA	GCA	GGC	AAC	ATC	CTA						
I	A	G	N	I	L						
CAC	CAC	CTC	GCC	TGC	AAC						
H	H	L	A	C	N						
GCC	GTC	TCC	ACC	CGA	CTC						
A	V	S	T	R	L						
TTC	GAC	GAA	GTG	GCA	CGG						
F	D	E	V	A	R						
ATC	TTC	GGC	CGA	GTC	AAC						
I	F	G	R	V	N						
GTC	CCT	GAC	CGC	GCT	CTA						
V	P	D	R	A	L						
TTC	GTA	TCT	TGT	CTC	CCG						
F	V	S	C	L	P						
GTC	ACG	GCG	ATC	CAG	CAC						
V	T	A	I	Q	H						
GGC	CCC	CCC	AAG	GGC	GAC						
G	P	P	K	G	D						

FIGURE 10D

total " 9546200T

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E - - - - - E - - - - - G - - - - - G

AAC TGG TTC GAG AAG CAG ACG AAA GGG ACG ATC GAT ATC ACG
N W F E K Q T K G T I D I T
TGG TTC TTT GGT GGG CTG CAG TTC CAG TTG GAG CAC CAC TTG
W F F G G L Q F O L E H L
GGG CAG CTT AGG AAG ATT GCG CCC TTG GCT CCG GAC TTG TGT
G Q L R K I A P L A R D L C
TAT AGG AGC TTC GGG TTT TGG GAC GCT AAT GTC AGG ACA ATT
Y R S F G F W D A N V R T I
GCG GTT CAG GCG CGT GAC CTT AAT TCG GCC CCG TGC CCT AAG
A V Q A R D L N S A P C P K
GCT TAT AAC ACC CAT GGT TGA TTG TGG TTT TGT GTT GTG GGT
A Y N T H G *
TTGATTTATGTCACAAATATTGAACCTGAATAACCATGGAAAGGCACCTACGTTACGCT
CCCTTGTTGGGGGCAAAAGTGCAGTATTTATTTCTTATCCCATGTACTTTTGTATT
TAATTTATTATTGATTAAATTTTGTGTAGTTGGGTGCTCTATAGCAAGTTTATAAT
AAAAAAAAAA

FIGURE 10E

100556200T

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G-----F
TGC CCA CCG TGG ATG GAC
C P P W M D
TTC CCT AGG CTG CCG CGT
F P R L P R
AAG AAG CAC GGG ATG CCG
K K H G M P
CGG ACG CTG AGG GAT GCG
R T L R D A
AAA CTT GGG TAT GGG GAA
K L G Y G E
TGG AGG ATC TTC TTA TTA

TAACTTTGCTAGCTGGTTGCCGT
ATTGTTCTTATTCGTATCATAAA
ACTGAGATATATTTTIGGTAA
G-----

FIGURE 10F

EP vs Bo Delta 6-desaturase Formatted Alignment

EPD6prot	MEGEAKKVI	TAEDEPR	HNKS	GDLWI	SIHGK	VYDV	RMVA	HPGG	VPL	LM	50
BoD6prot	MAAOL	KKVI	T	SDEL	KNHDK	P	GDLWI	SIHGK	AYDV	DMWK	50
Consensus	M	KKVI	T	L	H	K	GDLWI	SIHGK	VYDV	DMWK	50
EPD6prot	LAGQ	QVTD	AE	HA	HP	GT	WR	HL	DP	L	100
BoD6prot	LAGQ	EVTD	AE	VA	HP	AST	WK	NLD	K	F	100
Consensus	LAGQ	VTD	AE	A	HP	W	LD	F	EGY	LKD	100
EPD6prot	SRS	GI	FE	KK	G	H	I	M	MT	F	150
BoD6prot	SKM	GL	YD	KK	G	H	I	M	F	AT	150
Consensus	S	G	K	K	G	H	I	M	T	F	150
EPD6prot	WFG	AY	V	G	H	D	SG	H	M	V	200
BoD6prot	WFG	AY	V	G	H	D	SG	H	M	V	200
Consensus	WFG	AY	V	G	H	D	SG	H	M	V	200

A-----A

FIGURE 11A

TOT22T" 9526200T

A-----A

EPD6prot	L	W	C	N	S	L	C	Y	D	P	D	L	O	H	I	P	V	F	A	V	S	T	R	I	E	N	S	I	T	S	V	F	Y	G	R	V	L	R	F	D	E	V	A	R	I	V	S	Y	Q	250	
BoD6prot	I	A	C	N	S	L	E	Y	D	P	D	L	O	V	I	P	F	L	V	S	S	K	F	F	G	S	I	L	T	S	H	F	Y	E	K	R	L	I	F	D	S	L	S	R	F	F	V	S	Y	Q	250
Consensus	.	A	C	N	S	L	.	Y	D	P	D	L	O	.	I	P	.	V	S	.	S	K	F	.	F	G	S	I	L	T	S	.	F	Y	.	L	.	E	D	.	R	F	.	V	S	Y	Q	250			

EPD6prot	H	W	T	M	Y	P	M	I	F	G	R	V	N	L	E	I	Q	T	F	L	L	L	E	T	R	R	G	M	P	D	R	A	L	N	L	M	G	I	A	V	F	W	T	M	F	P	L	F	V	300
BoD6prot	H	W	T	R	Y	P	I	M	C	A	A	R	L	N	M	Y	V	Q	S	I	M	L	E	T	R	R	N	V	S	Y	R	A	E	L	L	G	L	V	F	S	I	W	P	L	I	V	300			
Consensus	H	W	T	.	Y	P	.	M	.	.	R	N	L	L	L	R	.	V	.	.	R	A	.	L	.	G	.	V	F	.	W	.	P	L	.	V	300			

EPD6prot	S	C	L	P	N	M	P	E	R	F	G	F	V	L	I	S	F	A	V	T	A	I	Q	R	V	O	F	I	L	N	H	F	S	G	D	T	Y	V	G	P	P	K	G	N	W	F	E	K	Q	350
BoD6prot	S	C	L	P	N	M	G	E	R	I	M	E	V	I	A	S	L	S	V	T	G	M	O	V	O	F	S	E	N	H	F	S	S	S	V	Y	V	G	K	P	K	G	N	W	F	E	K	Q	350	
Consensus	S	C	L	P	N	M	.	E	R	.	.	E	V	.	.	S	.	V	T	.	.	.	Q	.	V	O	F	.	L	N	H	F	S	.	.	Y	V	G	.	P	K	G	N	W	F	E	K	Q	350	

EPD6prot	T	K	G	T	I	D	I	T	I	G	P	P	W	M	D	W	F	F	G	G	L	Q	F	Q	L	E	H	H	L	F	P	R	I	P	R	G	L	R	K	I	A	P	L	A	R	D	L	E	C	K	K	400	
BoD6prot	T	D	G	T	I	D	I	T	I	G	P	P	W	M	D	W	F	H	G	G	L	Q	F	Q	L	K	H	H	L	F	P	K	M	P	R	C	N	L	R	K	I	S	P	Y	V	I	E	L	E	C	K	K	400
Consensus	T	.	G	T	.	D	.	T	.	G	P	P	W	M	D	W	.	.	G	G	L	Q	F	Q	.	.	K	H	H	L	F	P	.	P	R	.	L	R	K	E	C	K	K	400		

B-----B

FIGURE 11B

Footprint 9546200T

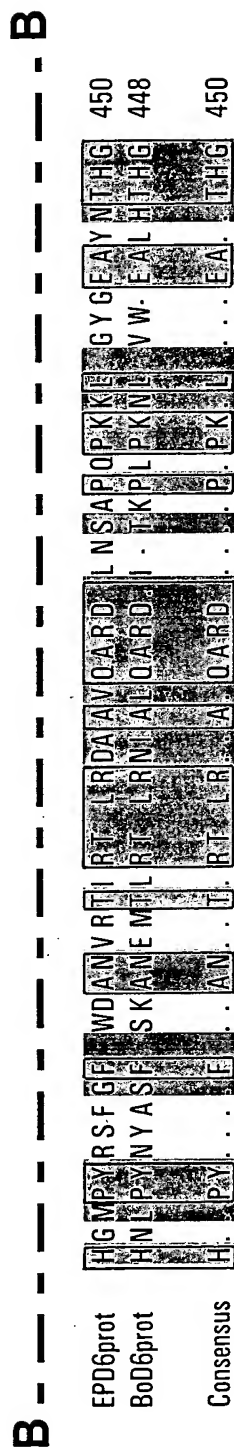
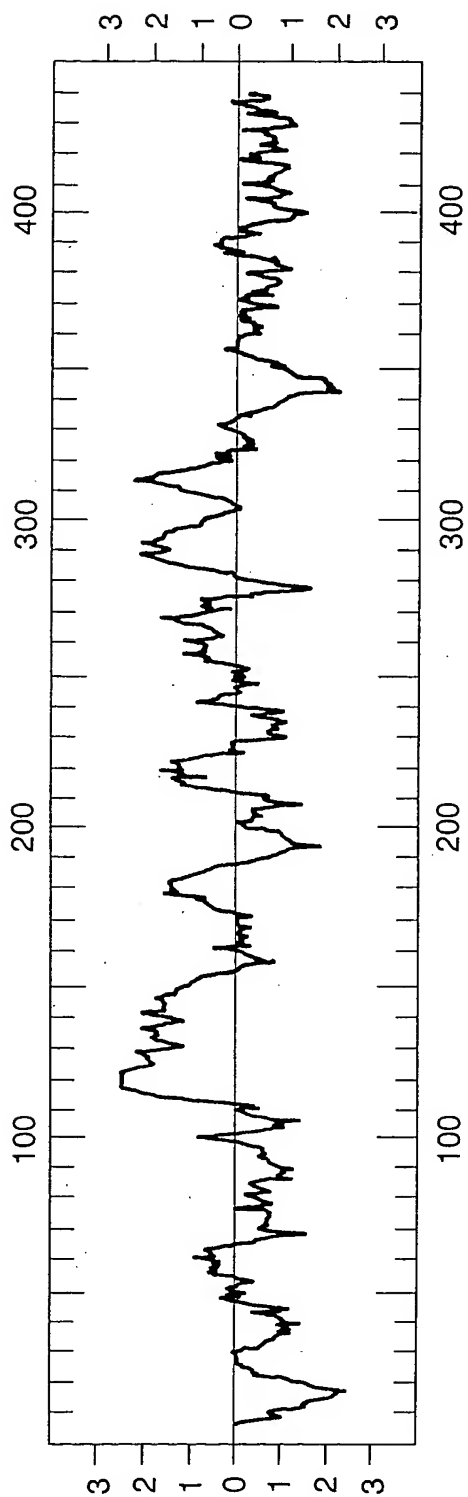


FIGURE 11C

FOF22T" 9546200T

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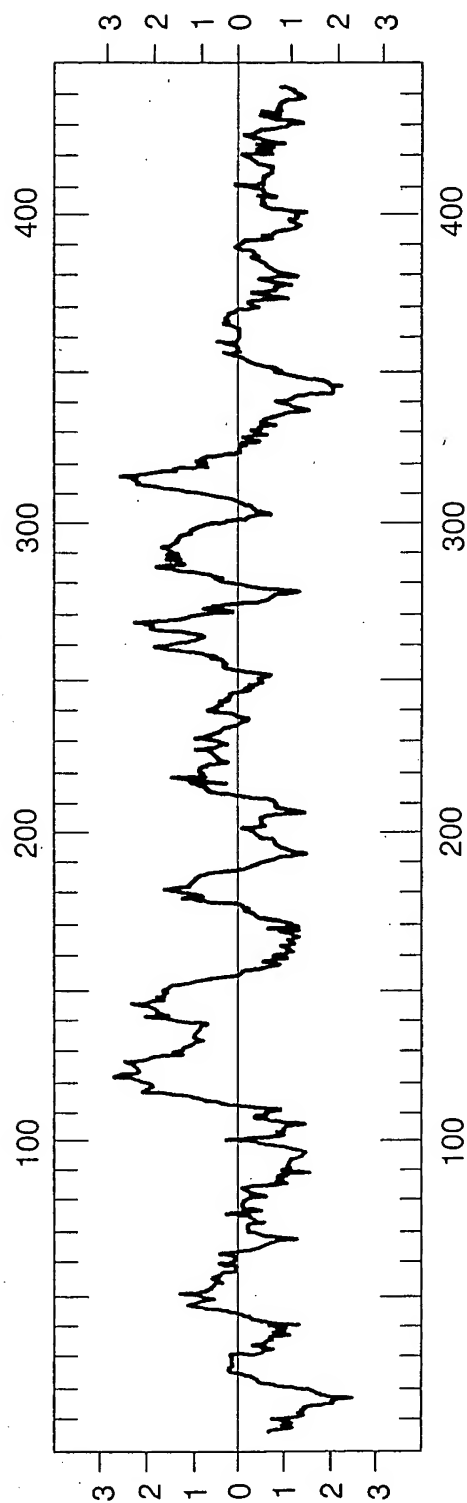


Borage Δ^6 -Desaturase Kyte-Doolittle Hydrophobicity Plot

FIGURE 12A

TOTAL 952600F

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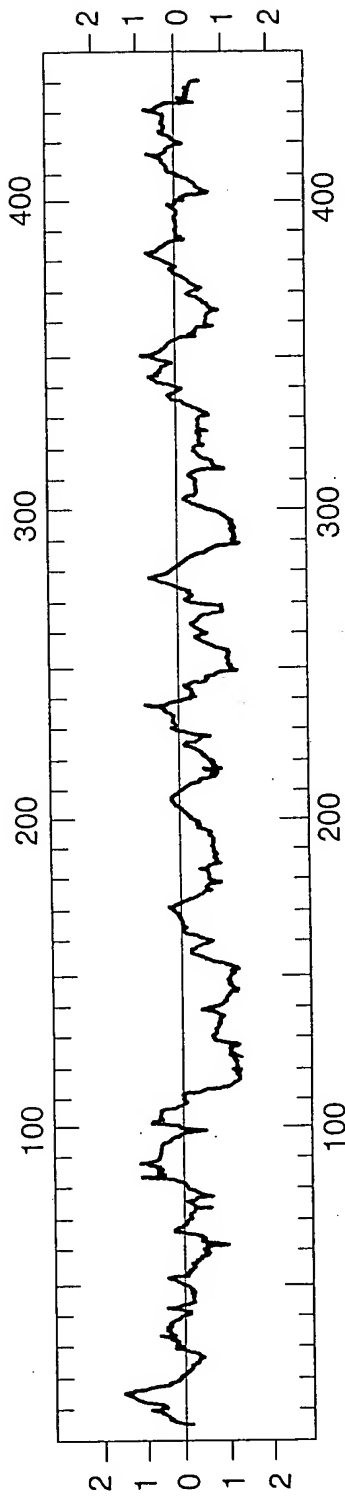


Evening Primrose Putative Δ^6 -Desaturase Kyte-Doolittle Hydrophobicity Plot

FIGURE 12B

TOPSET" 9546200F

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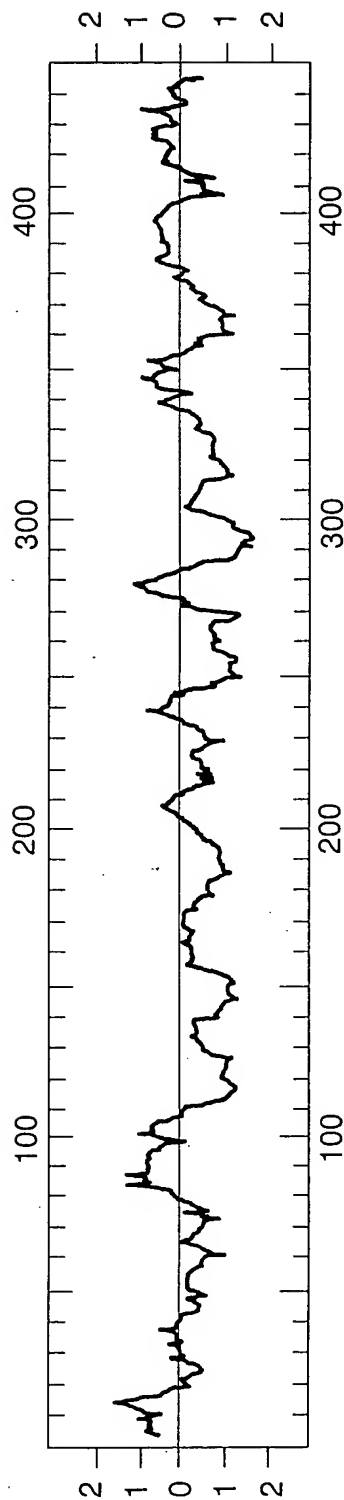


Borage Δ^6 -Desaturase Hopwood Hydrophilicity Plot

FIGURE 13A

TOT22T" 9526200T

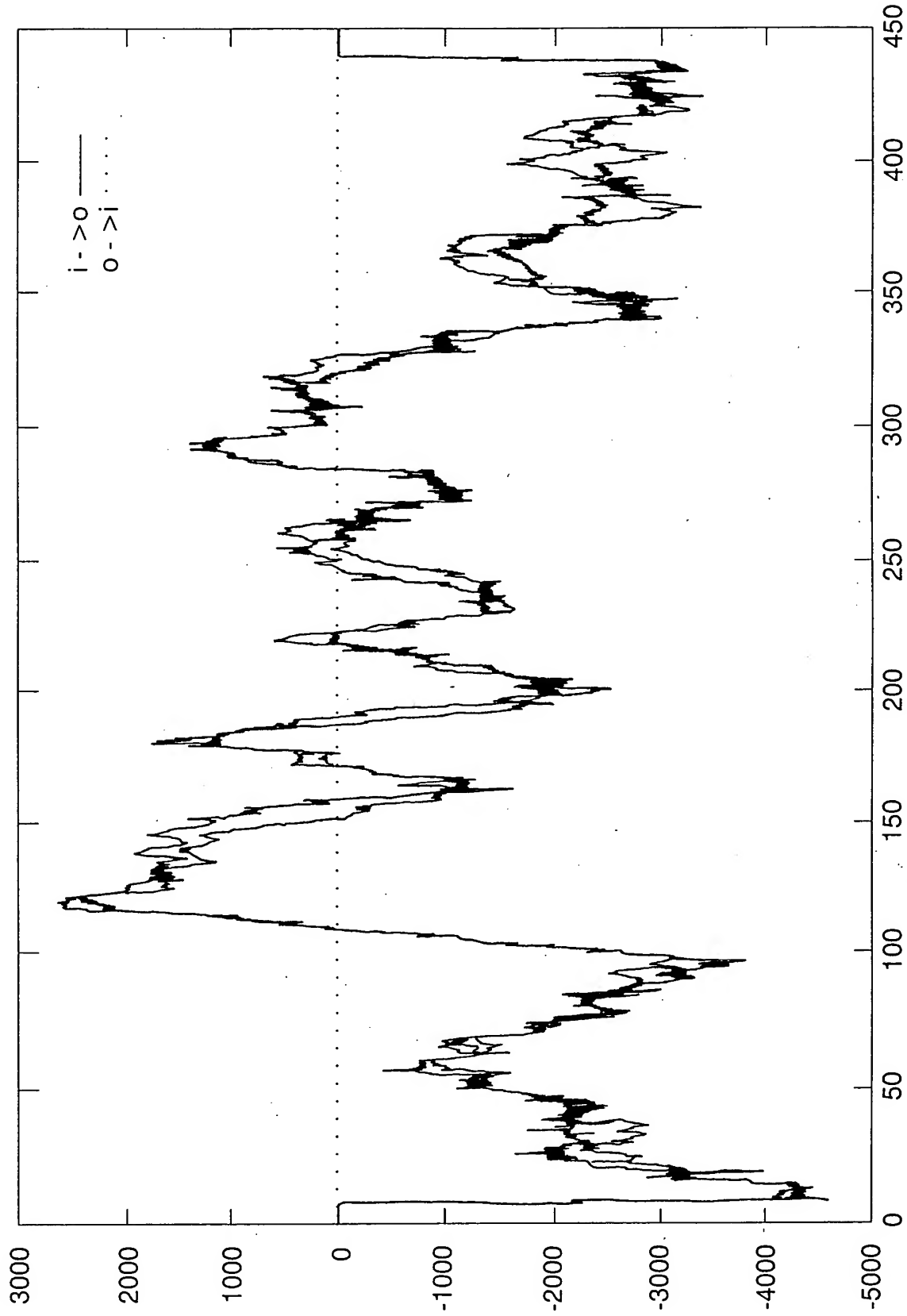
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Evening Primrose Putative Δ^6 -Desaturase Hopwood Hydrophilicity Plot

FIGURE 13B

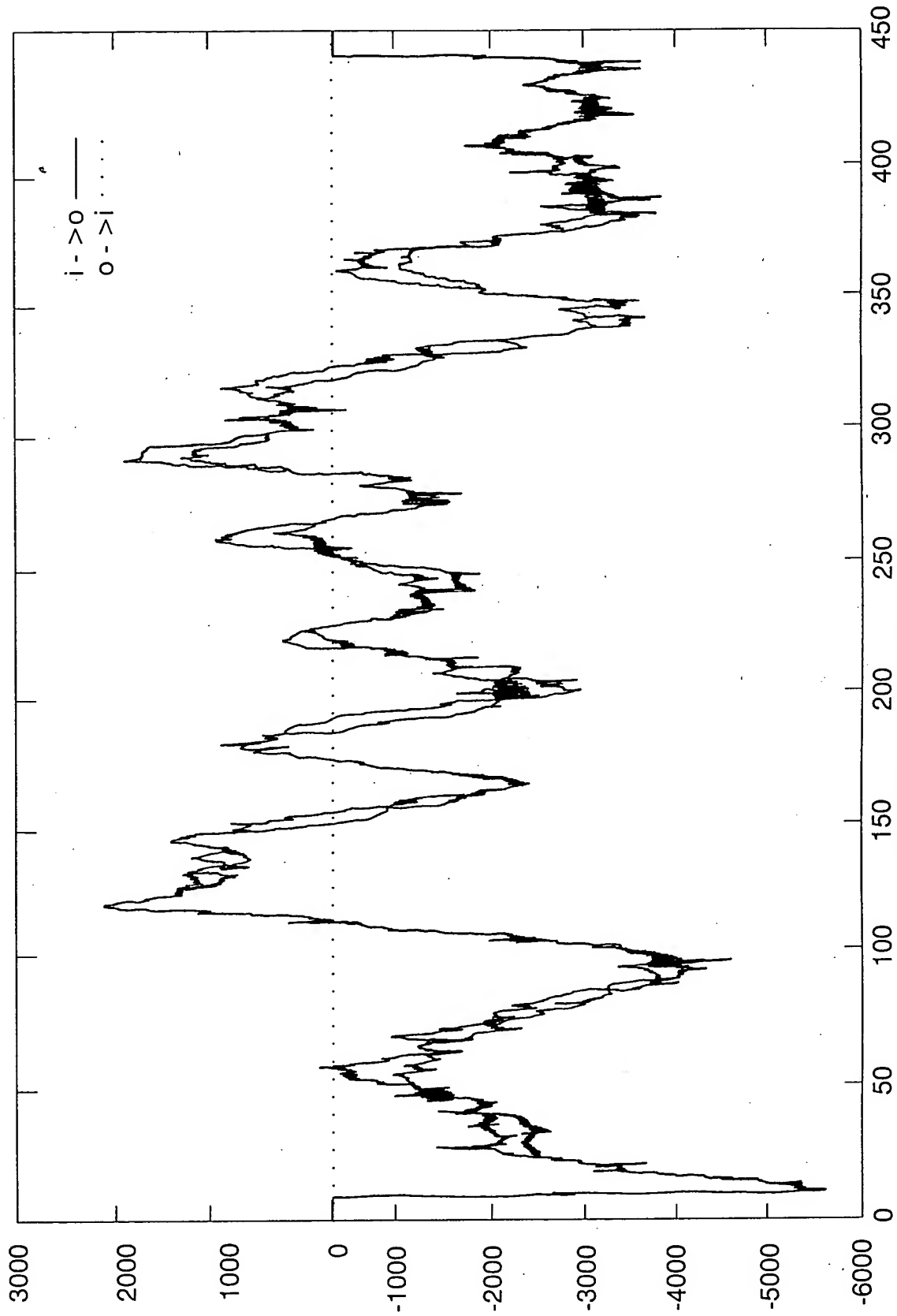
TOTAL 9546200



TMpred Output for Borage Delta 6-Desaturase

FIGURE 14A

TOT22T 9546200T



TMpred Output for Evening Primrose Seq

FIGURE 14B